

Notice of Allowability

Application No.

10/611,774

Examiner

Anh Ly

Applicant(s)

ZWILLING ET AL.

Art Unit

2162

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/10/2008.
2. ☒ The allowed claim(s) is/are 1-14, 16-19, 27-40 and 42-44 (renumbered as 1-35).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08);
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material


5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 01/25/2008.

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____


JEAN FLEURANTIN
PRIMARY EXAMINER /C 400

DETAILED ACTION

1. This Office Action is response to Applicant's RESPONSE filed on 01/10/2008.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael J. Swope (Reg. No. 38,041) on 01/25/2008 at (215) 568-3100.

The application has been amended as follows:

Claim 1:

1 (Currently Amended): A method for providing a database view comprising transaction-consistent data reflecting the contents of a database at a specific point in time, said database comprising data elements and associated with a transaction log, said transaction log comprising active transactions and inactive transactions, said database view comprising difference storage for storing prior versions of at least one of said data elements from said database, said method comprising:

determining a split point on said transaction log corresponding to said point in time;

identifying each transaction on said transaction log prior to said split point which performs modifications on said database;

storing each of said modifications in said difference storage;

maintaining a side page table that comprises information regarding whether each data element is stored in the difference storage and whether each data element is allocated in the difference storage;

identifying each active transaction on said transaction log prior to said split point;

undoing any corresponding modifications in said difference storage; and

storing said difference storage;

accepting a request for a specific data element in said database view;

determining if data is stored in a location corresponding to said specific data element in said difference storage;

responding to said request by reading said difference storage if data is stored in a location corresponding to said specific data element in said difference storage; and

responding to said request by reading said database if data is stored in a location corresponding to said specific data element in said difference storage.

Claim 15:

Cancel claim 15

Claim 16:

16 (Currently Amended): The method of claim 15, where said step of determining if data is stored in a location corresponding to said at least one specific data element is stored in said difference storage comprises determining if said the data corresponding to said at least one data element is valid ~~difference storage contains valid data in said location.~~

Claim 17:

17 (Currently Amended): The method of claim 15 1, where said step of determining if data ~~is stored in a location~~ corresponding to said at least one specific data element is stored in said difference storage comprises consulting the side page table.

Claims 20-26:

Cancel claims 20-26

Claim 27:

27 (Currently Amended): A computer-readable storage medium for providing a database view comprising transaction-consistent data reflecting the contents of a database at a specific point in time, said database comprising data elements and associated with a transaction log, said transaction log comprising active transactions and inactive transactions, said database view comprising difference storage for storing prior versions of at least one of said data elements from said database, said computer-readable medium with instructions to perform acts comprising:

determining a split point on said transaction log corresponding to said point in time;

identifying each transaction on said transaction log prior to said split point which performs modifications on said database;

storing each of said modifications in said difference storage;

maintaining a side page table that comprises information regarding whether each data element is stored in the difference storage and whether each data element is allocated in the difference storage;

identifying each active transaction on said transaction log prior to said split point;
and

undoing any corresponding modifications in said difference storage; and
storing said difference storage;

accepting a request for a specific data element in said database view;
determining if data is stored in a location corresponding to said specific data element in said difference storage;

responding to said request by reading said difference storage if data is stored in a location corresponding to said specific data element in said difference storage; and
responding to said request by reading said database if data is stored in a location corresponding to said specific data element in said difference storage.

Claim 41:

Cancel claim 41

Claim 42:

42 (Currently Amended): The computer-readable storage medium of claim 44 27, where said step of determining if data is stored in a location corresponding to said at least one specific data element is stored in said difference storage comprises determining if said the data corresponding to said at least one data element is valid difference storage contains valid data in said location.

Claim 43:

43 (Currently Amended): The computer-readable storage medium of claim 41 27, where said step of determining if data is ~~stored in a location~~ corresponding to said at least one specific data element is stored in said difference storage comprises consulting the side page table.

3. Claims 15, 20-26, 41 were cancelled.
4. Claims 1-14, 16-19, 27-40 and 42-44 are allowed.

Allowable Subject Matter

5. The present application has been thoroughly reviewed. Upon searching a variety of databases, the examiner respectfully submits that claims 1-14, 16-19, 27-40 and 42-44 are allowed in light of the applicants' argument and in light of the prior arts of made record.

The following is an examiner's statement of reasons for allowance:

Combination of Vemuri et al. (Pub. No.: US 2004/0054643 A1) and BOHANNON et al. (Pub. No.: US 2002/0091718 A1) both fail to teach maintaining a side page table that comprises information regarding whether each data element is stored in the difference storage and whether each data element is allocated in the difference storage; accepting a request for a specific data element in said database view; determining if data is stored in a location corresponding to said specific data element in said difference storage; responding to said request by reading said difference storage if data is stored in a location corresponding to said specific data element in said difference storage; and responding to said request by reading said database if data is stored in a location corresponding to said specific data element in said difference storage.


6. These distinct features, in conjunction with all other limitations of the dependents and independent claims render claims 1-14, 16-19, 27-40 and 42-44 them allowable.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on statement of Reasons for Allowance."

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Ly whose telephone number is (571) 272-4039 or via E-Mail: ANH.LY@USPTO.GOV (Written Authorization being given by Applicant (MPEP 502.03 [R-2])) or fax to (571) 273-4039 (unofficial fax number direct to Examiner's office). The examiner can normally be reached on TUESDAY – THURSDAY from 8:30 AM – 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on (571) 272-4107.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Any response to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, or faxed to:
Central Fax Center: (571) 273-8300

ANH LY 
JAN. 31st, 2008


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